

1.(Currently amended) A screen system for use in production of a coloured halftone image having a processor arrangement configured to take as input a digital original image and to generate a plurality of screens representing respective different colours or black in the image, wherein:

~~a plurality of screens each represent different colours or black in the image,~~
each screen has a pattern of printing areas which defines a minimum mesh,
each pattern has a parcel of printing areas which repeats throughout the
respective screen, and

two or more of the screens have different non-orthogonal minimum meshes and have parcels which correspond in shape and size, said two or more screens having different non-orthogonal minimum meshes have printing areas which extend to join first along directions other than that of their closest spacing.

2.(Original) A system according to claim 1 wherein:

each minimum mesh is formed by two sets of parallel lines which lie along directions defined by equal shortest or shortest and next shortest distances between the printing areas.

3.(Original) A system according to claim 2 wherein:

at least two of the minimum meshes are non-orthogonal in that the two sets of lines are not perpendicular.

4.(Original) A system according to claim 1 wherein:

the parcels which correspond, between the two or more screens have a parallelogram shape.

5.(Original) A system according to claim 1 wherein:

the parcels which correspond between the two or more screens have a common orientation.

6.(Original) A system according to claim 1 wherein:

the parcels are formed according to an orthogonal mesh .

7.(Original) A system according to claim 1 wherein:

the printing areas in darker tones extend along next shortest or longer distances between the areas.

8.(Previously presented) A method of preparing halftone patterns for production of a coloured image,

comprising:

receiving information representing colour and tone variation in an image,

creating a plurality of printing patterns which represent different colours or

black in the image,

forming each pattern from variable printing areas which define respective meshes and repeating parcels,

at least two of the patterns having different non-orthogonal minimum meshes and corresponding parcels which are substantially similar in shape and size, said at least two patterns having printing areas which extend to join first along directions other than that of their closest spacing.

9.(Original) A method according to claim 8 wherein:

the non-orthogonal meshes are each defined by two sets of parallel lines which intersect at non-right angles.

- 10.(Original) A method according to claim 8 wherein:
the corresponding parcels are substantially similar in orientation.
- 11.(Original) A method according to claim 8 wherein:
the patterns each have different arrangements of printing areas within their respective parcels.
- 12.(Original) A method according to claim 8 further comprising:
joining the printing areas in darker tones along directions of second shortest or longer distances between the areas.
- 13.(Currently amended) A pattern generation system for a halftone image having a processor arrangement configured to take as input a digital original image and to generate a pattern for [[a]] the halftone image, wherein:
printing areas define a non-orthogonal minimum mesh and extend first with darkening tone along directions other than those of their closest spacing.
- 14.(Currently amended) A pattern generation system ~~pattern~~ according to claim 13 wherein: the printing areas extend along the direction of second, third or fourth closest spacing.
- 15.(Currently amended) A pattern generation system ~~pattern~~ according to claim 13 wherein: the printing areas have an oval shape
- 16.(Currently amended) A screen system for use in production of a coloured halftone image, having a processor arrangement configured to take as input a digital

original image and to generate a plurality of screens representing respective different colours or black in the image, wherein:

~~a plurality of different screens each represent different colours or black in the image,~~

each screen has a pattern of printing areas which defines a minimum mesh,
the minimum meshes of at least two screens are non-orthogonal and have
printing areas which extend to join first along directions other than that of their closest
spacing.

17.(Original) A screen system according to claim 16 wherein: all of the screens have
non-orthogonal meshes.

18.(Original) A method of preparing a halftone pattern, comprising:
receiving information representing tone variation in an image,
creating a pattern of printing areas which represents the variation by
forming the pattern to define a non-orthogonal minimum mesh, and
varying the printing areas by extension toward nearby areas other than their
nearest neighbours.

19.(Original) A method according to claim 18 further comprising:
extending the printing areas toward their second or third nearest neighbours.

20.(Previously presented) Apparatus which implements a screen system or which
implements a method according to any one of the preceding claims.

21.(Cancelled)

- 22.(Previously presented) A halftone image produced by the method set forth in Claim 8.
- 23.(Previously presented) A halftone image produced by the method set forth in Claim 18.
- 24.(Previously presented) A halftone image produced by an apparatus according to claim 20.